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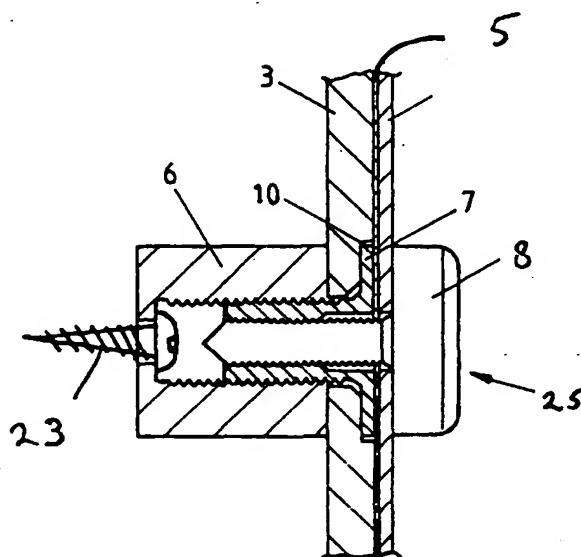
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(54) Title: CONNECTING ASSEMBLY

(57) Abstract

An assembly and method for mounting two panels where a first member is mounted to, into or from a support, a second member is threaded to said mounted first member, and a third member is threaded to said second member when it is already threadingly engaged to said mounted first member, wherein said second member has a portion extending through a hole in a first panel and into said first member so as to retain between the first and second member the first panel and wherein the third member has a portion extending through a hole in a first panel and into said second member so as to retain between the first and second member the second panel.



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CONNECTING ASSEMBLY

TECHNICAL FIELD

This invention relates to an assembly for mounting two or more panels or sheets,
5 hereafter "panels". The invention also relates to an assembly of the said two or more
panels or sheets and said assembly for mounting those two or more panels or sheets.

BACKGROUND ART

It is known to mount two or more and in particular two panels substantially parallel
to each other. Such devices may be employed to provide display advertising wherein an
10 item of printed matter, for example a poster, is mounted onto a panel or a wall and covered
with a transparent material such as perspex.

It is an object of the present invention to provide an assembly for mounting two or
more panels or sheets which at least provides the public with a useful choice.

DISCLOSURE OF INVENTION

15 Accordingly in a first aspect the present invention consists in:

**an assembly for mounting two panels or sheets ("panel"), said assembly
comprising or including:**

a first member capable of being mounted to, into or from a support,

a second member threadingly engageable to said mounted first member, and

20 a third member threadingly engageable to said second member when it is already
threadingly engaged to said mounted first member,

wherein said second member can retain a first panel (having a hole or slot) located
by such hole or slot on and/or about said first member provided the hole or slot is
appropriately sized,

25 **and wherein** said third member can retain a second panel (having a hole or slot)
located by such hole or slot on and/or about said second member provided the hole or slot
is appropriately sized.

Preferably the thread of the first member is female.

Preferably the thread of the third member is male.

30 Preferably said third member can have its male threaded protuberance pushed
through a sheet of paper (etc) to be interposed between said panels.

In other preferred forms of the present invention a number of said second members
may be provided so as to enable multiple sheets of paper, etc, to be interposed between
multiple panels.

35 Preferably said second member incorporates a rebate so ~~as to recessed~~ said second
member therein.

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Alternatively said first panel may be substantially planar, that is not including the rebate.

In another aspect the present invention consists in an assembly of two panels or sheets, said assembly comprising or including:

- 5 a first member capable of being mounted to, into, or from a support,
a second member threadably engageable to said mounted first member, and
a third member threadably engageable to said second member when it is already threadably engaged to said mounted first member;
a first panel having a hole or slot; and
10 a second panel having a hole or slot;
wherein said second member retains said first panel located by such hole or slot on and/or about said first member; and
wherein said third member retains said second panel located by such hole or slot on and/or about said second member.

15 Preferably the thread of said first member is female.

Preferably the thread of said third member is male.

Preferably said third member can have its male threaded protuberance pushed through a sheet of paper (etc) to be interposed between said first and second panel.

In other preferred forms of the present invention a number of said second members
20 may be provided so as to enable multiple sheets of paper, etc, to be interposed between multiple panels.

Preferably said second member incorporates a rebate so as to recessed said second member therein.

Alternatively said first panel may be substantially planar, that is not including the
25 rebate.

In yet another aspect the present invention consists in a method of mounting two or more panels or sheets "hereinafter panels" comprising or including the steps of
providing a first member, said first member being mounted to, into or from a support,

30 providing a second member threadably engageable with said mounted first member and

providing a third member threadably engageable to said second member when it is threadfully engaged to said mounted first member,

retaining a first panel having a hole or slot therein located by such a hole or slot on
35 and/or about said first member by threadably engaging said second member to said first member, and

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retaining a second panel by means of threadably engaging said third member to said second member through an appropriately sized hole or slot in said second panel.

Preferably the thread of the first member is female.

Preferably the thread of the third member is male.

5 Preferably when said third member is engaged with said second member the male portion of said third member pierces printed matter such as a poster.

Accordingly in yet another aspect the present invention consists in a method of mounting two panels or sheets comprising

10 mounting a first panel substantially proud of a support by means of a first member mounted on said support;

said first panel being retained on or over said first member by means of a second member threadably engaged to said mounted first member;

and retaining a second panel on or over said second member by means of a third member threadably engaged with said second member.

15 Preferably said first and second panels are retained on said first and second members respectively by means of said second and third members respectively through an appropriately sized hole or slot in said first and second panels.

Preferably the thread of said first member is female.

Preferably the thread of said third member is male.

20 Preferably said third member can have its male threaded protuberance pushed through a sheet of paper or other printed matter to be interposed between the panels.

In another aspect the present invention consists in an assembly for mounting two or more panels or sheets as herein described with reference to any one or more of the accompanying figures.

25 Accordingly in yet another aspect the present invention consists in an assembly of two or more panels as herein described with reference to any one or more of the accompanying figures.

BRIEF DESCRIPTION OF DRAWINGS

30 Preferred forms of the present invention will now be described with reference to the accompanying drawings in which:

Figure 1 shows a perspective view of an assembly of two panels 1 according to a preferred form of the present invention, the panels 3 and 4 are mounted substantially parallel and overlying each other by means of an assembly for mounting two or more panels of sheets 2, the assembly 1 incorporates, between said first 3 and second 4 panel, 35 a sheet 5, said sheet being preferably a sheet of printed paper or card or similar, for

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example advertising for other graphic work; the second sheet 4 is preferably of a perspex or other suitable transparent or translucent second material;

Figure 2 shows a top and, given the shape of the preferred form of the present invention illustrated, bottom and side views of an assembly 1 according to a preferred form of the present invention, it should be noted that various shapes of the panels 3 and 4 are contemplated by the present invention, for example squares, rectangles or other shapes including various straight side or planar shapes and also shapes incorporating curves such as circular panels, the figure 2 also shows the assembly for mounting two or more panels or sheets 2 and shows the first member 6 and the third member 8, the second member 7 is not shown in this figure as it is not visible due to the fact that in some preferred forms of the invention it is rebated into the first panel 3;

Figure 3 shows a front view of an assembly of two panels mounted using assemblies for mounting panels according to a preferred form of the present invention, as mentioned above this preferred form of the invention shows a rectangular panel having the assemblies for mounting two panels or sheets at each corner thereof, although this is a preferred form of the invention, other shapes and positionings for the assemblies 2 are envisaged, the dotted outline in Figure 3 shows the outline of the sheet of paper or card which is sandwiched between said first 3 and second 4 panels, the sheet 5 is at least partially visible beneath said second panel 4 as said second panel 4 is transparent or at least translucent, other forms of the invention are contemplated wherein said first panel 3 is transparent or at least partially translucent and illumination means are provided on said support from which said first member 6 is mounted, in use, this may provide a degree of illumination of the sheet material 5;

Figure 4 shows a partial perspective view showing the arrangement of the first panel 3 and second panel 4 in relation to each other being engaged with said assembly for mounting two panels or sheets 2;

Figure 5A shows a perspective view through A-A showing the first member 6, said second member 7 which is not visible in the previous figures, and the third member 5, the figure shows the recess or rebate 10 in said first panel 3 into which said second member 7 sits, the surface of the said first panel 3 adjacent said second panel 4 is thus flush, in other forms of the invention there may be no recess or rebate 10 and the second member 7 may sit atop the first sheet 3, although in preferred forms of the invention the first, second and third members are substantially cylindrical, it is possible there may be other forms of the invention in which this is not the case, for example the members may be octagonal or hexagonal or other shapes;

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Figure 5B is the same as Figure 5A except that the need for the recess 10 is avoided through the use, as shown in later drawings, of a thinner flange 7;

Figures 6 A, B and C show respectively:

a plan view;

5 a cross-sectional side view and a simple side view of an assembly for mounting two panels or sheets 2 according to a preferred form of the present invention, the drawings illustrate that the thread 20 of said first member 6 is female whereas the thread 21 of the third member is male, also shown in the figures is the piercing point 22 on said third member 8 which enables it to be pushed through a sheet of paper, etc, which is interposed
10 between said first and second panels 3 and 4;

Figure 8 shows a perspective view of an assembly for mounting two or more panels or sheets according to a preferred form of the present invention showing the first member 6, second member 7, and third member 8;

Figure 9 shows a side view of another preferred form of the present invention
15 which provides an assembly 2 for mounting panels or sheets, in this form of the present invention additional second members 7 are provided, these second members are designated by 17 in the Figure 9, in other forms of the invention multiple, for example three or four second members 7 may be provided, this form of the present invention allows for a further number of panels or sheets of printed matter to be mounted adjacent
20 each other or enables layers of sheets of paper which include graphic works, for example is designated by 5 in the previous figures to be mounted on top of each other, such an arrangement may provide for a layering effect of the graphic work;

Figure 10 shows a side view of an assembly for mounting panels 2 according to a preferred form of the present invention, said figures showing the additional second
25 member 17;

Figure 11 shows a side view of another form of the present invention wherein a third second member 27 is provided;

Figure 13 is a cross sectional view of another form of the member 6 as per a preferred form of the present invention;

30 whereas Figure 12b is a plan view of such a member 7;

Figure 13a is a cross sectional view of a member 6 according to another preferred form of the present invention;

Figure 13b is a plan view of such a member 6;

Figure 14a and b show a cross sectional view of the plan of yet another member
35 7 according to a preferred form of the present invention;

Figure 15 shows various standard units as outlined in Table 1 and 2;

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Figure 16 shows side elevations of various members as outlined in Table 3;

Figure 17 shows a unit where the first member 6 has an external thread to allow it to be secured into an aperture such as a hole in a wall or the like to allow screw-like engagement; and

- 5 Figure 18 shows incorporation of a spacer unit, for example a spacer unit as shown in Figure 16 in an assembled form of the present invention.

BEST MODE OF CARRYING OUT THE INVENTION

The present invention provides assemblies for mounting two or more panels or sheets, such an arrangement is often employed in the advertising industry to enable printed
10 matter such as printed sheets to be displayed. It is often the case that a graphic work such as an advertisement is required to be displayed mounted on a first panel 3 but protected by a second panel 4 which may comprise, for example, a perspex sheet.

As shown in the figures the present invention provides an assembly for mounting two or more panels or sheets 2. The assembly comprises a first member 6, said first
15 member is capable of being mounted to, onto, into or from a support which may be a support surface such as a wall. Such mounting may take the form of a screw or bolt 23 or may simply comprise adhesive mounting, for example by use of glue. In other forms of the invention the first member 6 may be unitary with said support surface, for example, it may be moulded onto the interior surface of a transport vehicle such as a train, ferry or
20 bus. The first member may also for example be provided with an external thread 24 as shown in figure 17 for the threading of the first member at least in part into a hole or aperture. The thread 24 may be such as to allow the first member to thread into a threaded aperture or alternatively maybe provided with for example a taper such as to allow this member to be screw threaded into a hole in for example a wood or metal or the like. The
25 first member 6 should be of a material suitable to have a female thread 20 therein. In preferred forms of the invention the first member 6 has a hole drilled therethrough and a thread placed on an internal surface of said hole. Those skilled in the art to which the invention relates will be aware of many techniques for including such a thread.

The second member 7 may take a variety of forms but should include a portion
30 which has a thread capable of engaging with the female thread 20 of said first member 6. In the preferred form of the present invention wherein a single second member 7 is provided, said second member should include a portion having a female thread therein which is engageable with the male thread 21 of said third member 8. In the alternative preferred forms of the invention wherein multiple second members are provided, for
35 example, 17 and 27, said first second member 7 includes a thread, preferably female, which is engageable with a thread preferably male on said additional said second member.

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Table 1 shows the dimensions of a standard unit in assembly according to a preferred form of the present invention utilising components of the preferred standard size.

5	Standard Unit			
	Spacing Off Wall	Back Panel	Front Panel	Components
	15mm	0-6mm	0-7mm	A1 + B1 + C2

Table 2 shows the use of variously sized components to provide an assembly as per other preferred forms of the present invention.

10

	Standard Unit			
	Spacing Off Wall	Back Panel	Front Panel	Components
15	15mm	0-6mm	0-1mm	A1 + B1 + C1
	15mm	0-6mm	0-7mm	A1 + B1 + C2
	15mm	3-6mm	7-16mm	A1 + B1 + C3
	15mm	0-6mm	10-16mm	A1 + B1 + C3
	15mm	0-6mm	16-22mm	A1 + B1 + C4
20	15mm	6-11mm	0-1mm	A1 + B2 + C1
	15mm	6-11mm	0-7mm	A1 + B2 + C2
	15mm	6-11mm	5-16mm	A1 + B2 + C3
	15mm	6-11mm	11-22mm	A1 + B2 + C4
	15mm	17-22mm	0-8mm	A1 + B3 + C3
25	15mm	17-22mm	0-14mm	A1 + B3 + C4
	20mm	0-6mm	0-1mm	A2 + B1 + C1
	20mm	0-6mm	0-7mm	A2 + B1 + C2
	20mm	0-6mm	10-16mm	A2 + B1 + C3
	20mm	0-6mm	16-22mm	A2 + B1 + C4
30	20mm	0-11mm	0-1mm	A2 + B2 + C1
	20mm	0-11mm	0-7mm	A2 + B2 + C2
	20mm	0-11mm	5-16mm	A2 + B2 + C3
	20mm	0-11mm	11-22mm	A2 + B2 + C4
	20mm	8-22mm	0-8mm	A2 + B3 + C3
	20mm	8-22mm	0-14mm	A2 + B3 + C4
	25mm	0-6mm	0-1mm	A3 + B1 + C1

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5	25mm	0-6mm	0-7mm	A3 + B1 + C2
	25mm	0-6mm	10-16mm	A3 + B1 + C3
	25mm	0-6mm	16-22mm	A3 + B1 + C4
	25mm	0-11mm	0-1mm	A3 + B2 + C1
	25mm	0-11mm	0-7mm	A3 + B2 + C2
	25mm	0-11mm	5-16mm	A3 + B2 + C3
	25mm	0-11mm	11-22mm	A3 + B2 + C4
	25mm	7-22mm	0-8mm	A3 + B3 + C3
	25mm	7-22mm	0-14mm	A3 + B3 + C4
10				

Table 3 shows yet another preferred form of the present invention in which a spacer is provided between the sheets or panels.

Standard Unit					
15	Spacing Off Wall	Back Panel	Front Panel	Components	
	15mm	0-6mm	0-3mm	A1 + B1 + C1 + D1	
	15mm	0-6mm	0-3mm	A1 + B1 + C1 + D2	
	15mm	6-11mm	0-3mm	A1 + B2 + C1 + D1	
	15mm	6-11mm	0-3mm	A1 + B2 + C1 + D2	
	20	20mm	0-6mm	0-3mm	A2 + B1 + C1 + D1
		20mm	0-6mm	0-3mm	A2 + B1 + C1 + D2
		20mm	0-11mm	0-3mm	A2 + B2 + C1 + D1
20mm		0-11mm	0-3mm	A2 + B2 + C1 + D2	
	25mm	0-6mm	0-3mm	A3 + B1 + C1 + D1	
	25	25mm	0-6mm	0-3mm	A3 + B1 + C1 + D2
		25mm	0-11mm	0-3mm	A3 + B2 + C1 + D1
		25mm	0-11mm	0-3mm	A3 + B2 + C1 + D2

In preferred forms of the invention said third member 8 includes a point or protuberance 22 thereon, said point 22 being capable of piercing sheets which is printed paper. In other forms of the invention said third member 8 has no such point and accordingly a suitable aperture should be placed through said printed sheet for it is incorporated into said assembly. An appropriately shaped top region 26 of the internal thread of the second member 7 can be provided such as to allow for, for example an allan

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key of the like securing means to tighten the second member in its fully engaged condition. The top region is preferably of a shape to receive and to allow the second member to be driven by such a fastening means as an allan key.

Said first 6, second 7, and third 8 members are produced from a variety of several materials. For example, may be produced from a variety of suitable materials. For example, may be produced from a suitable metal and may for example be machined out of a suitable diameter rod of said metal. Other forms of the invention may comprise moulded members. As mentioned previously said second member 7 may be rebated into said first panel 3 or may in other forms of the invention overly said panel 3. In the forms of the invention where it is rebated the second panel 4 may be brought down into close contact with said printed sheet 5 and said first panel 3. This may help keep the printed sheet 5 flat.

In forms of the invention which employ multiple second members 7, for example 17 and 27, a number of printed sheets 5 may overly each other. Such a preferred form of the present invention may be employed to provide an interesting visual effect, for example a layering of transparent or translucent printed sheets 5. For example it may comprise the use of a printed sheet 5 which is a second sheet material overlying it. Said second sheet material may comprise for example a translucent filter, which may be coloured, to provide an interesting visual effect.

As mentioned previously said second sheet 4 preferably provides protection to said printed sheet 5. As such it may be used from a variety of materials such as perspex, other clear or translucent sheet, plastics material or it may comprise glass. A wide variety of materials may be used to produce said first sheet 3. For example it may comprise a sheet of wood or wood product such as medium density fibreboard. In other forms of the invention it may comprise a sheet of suitable plastic material such as perspex. The sheet material may be translucent, transparent or opaque. In other forms of the invention the first sheet 3 may comprise a sheet of metal.

Preferably, as shown in at least Figure 5B, recesses 10 are avoided by the provision of very thin Flanges 7. The method of assembly using the invention as herein described preferably comprises the steps of securing the first member 6 to a support either by a threaded engaging means 23 as for example shown in figure 5A or by an adhesive or alternatively by for example threading the first member into a hole of a support utilising for example an external thread as shown in figure 17. Any number of suitably spaced units can be provided on such a support and, in for example figure 3, there are provided four such assemblies. A first sheet, with aperture(s) can then be secured to the or each of the assemblies by threading said second member into the thread of said first member.

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This then located relative to the first members, the first sheet of material. A second sheet can then be secured to lie substantially parallel to the first sheet, and can be held in a fixed relationship by threading the member 8 into the member 7. Between the sheets printed member matter 5 may be provided. Such printed member can be for example any
5 advertising carrying substrate, menu board, highrise building floor numbering or any similar or the like matter.

The substrate 5 can be easily replaced by unthreading the member 8 from the member 7 thereby allowing for the substrate 5 to be removed while still allowing for the sheet 3 to remain in place and located by the member 7 and 6.

10 It is also envisaged that the member 8 may be provided with a head 25 which has the provisions for example receiving a screw driver to allow for the member 8 to be tightly threaded into the member 7. The head 25 may alternatively be provided with a particularly shaped recess or other like provision for receiving a complementary shaped securing means such that only that or the like securing means can fasten and unfasten the
15 member 8. Such can be considered a security feature to prevent tampering and in particular the removal of the member 8 such that the advertising substrate can be removed or tampered with.

It can be seen that the present invention provides an assembly for mounting two or more panels or sheets and an assembly comprising said panels or sheets and said
20 assembly which will at least provide the public with a useful choice.

CLAIMS:

1. An assembly for mounting two panels or sheets ("panel"), said assembly comprising or including:
 - 5 a first member capable of being mounted to, into or from a support,
 - a second member threadingly engageable to said mounted first member, and
 - a third member threadingly engageable to said second member when it is already threadingly engaged to said mounted first member,
 - wherein said second member can retain a first panel (having a hole or slot) located
 - 10 by such hole or slot on and/or about said first member provided the hole or slot is appropriately sized,
 - and wherein said third member can retain a second panel (having a hole or slot) located by such hole or slot on and/or about said second member provided the hole or slot is appropriately sized.
- 15 2. An assembly of claim 1 wherein the thread of the first member is female.
3. An assembly as claimed in claim 1 or 2 wherein the thread of the third member is male.
4. An assembly as claimed in claim 3 wherein said third member is adapted to enable its male threaded protuberance to be pushed through a sheet of paper (etc) to be interposed
- 20 between said panels.
5. An assembly as claimed in any one of the preceding claims wherein there is number of said second members provided so as to enable multiple sheets of paper, etc, to be interposed between multiple panels.
6. An assembly as claimed in any one of the preceding claims wherein said second
- 25 member incorporates a rebate so as to be able to receive said second member therein.
7. An assembly as claimed in any one of the preceding claims including said panels.
8. An assembly of two panels or sheets, said assembly comprising or including:
 - a first member capable of being mounted to, into, or from a support,
 - a second member threadably engageable to said mounted first member, and
 - 30 a third member threadably engageable to said second member when it is already threadably engaged to said mounted first member,
 - a first panel having a hole or slot; and
 - a second panel having a hole or slot;
 - wherein said second member retains said first panel located by such hole or slot on
 - 35 and/or about said first member; and

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wherein said third member retains said second panel located by such hole or slot on and/or about said second member.

9. An assembly as claimed in claim 8 wherein the thread of said first member is female.
- 5 10. An assembly as claimed in claim 8 or 9 wherein the thread of said third member is male.
11. An assembly as claimed in claim 10 wherein said third member is adapted to enable its male threaded protuberance to be pushed through a sheet of paper to be interposed between said first and second panel.
- 10 12. An assembly as claimed in any one of claims 8 to 11 wherein there are a number of said second members provided so as to enable multiple sheets of paper, etc, to be interposed between multiple panels.
13. An assembly as claimed in any one of claims 8 to 12 wherein said second member incorporates a rebate so as to enable said second member to be recessed therein.
- 15 14. An assembly as claimed in any one of claims 8 to 13 wherein said first panel is substantially planar.
15. A method of mounting two or more panels or sheets "hereinafter panels" comprising or including the steps of
- 20 providing a first member, said first member being mounted to, into or from a support,
- providing a second member threadably engageable with said mounted first member and
- providing a third member threadably engageable to said second member when it is threadfully engaged to said mounted first member,
- 25 retaining a first panel having a hole or slot therein located by such a hole or slot on and/or about said first member by threadably engaging said second member to said first member, and
- retaining a second panel by means of threadably engaging said third member to said second member through an appropriately sized hole or slot in said second panel.
- 30 16. A method of claim 15 wherein the thread of the first member is female.
17. A method of claim 15 or 16 wherein the thread of the third member is male.
18. A method as claimed in claim 17 wherein said third member is engaged with said second member the male portion of said third member pierces a printed sheet such as a poster.
- 35 19. A method of mounting two panels or sheets comprising or including

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mounting a first panel substantially proud of a support by means of a first member mounted on said support; said first panel being retained on or over said first member by means of a second member threadably engaged to said mounted first member;

and retaining a second panel on or over said second member by means of a third member threadably engaged with said second member.

20. A method as claimed in claim 19 wherein said first and second panels are retained on said first and second members respectively by means of said second and third members respectively through an appropriately sized hole or slot in said first and second panels.

21. A method as claimed in claim 19 or 20 wherein the thread of said first member is female.

22. A method as claimed in any one of claims 19 to 21 wherein the thread of said third member is male.

23. A method as claimed in claim 22 wherein the male threaded protuberance of said third member has been pushed through a sheet of paper or other printed matter interposed between the panels.

24. A method as claimed in any one of claims 15 to 23 which includes interposing between said two panels a poster or the like sheet member to be displayed.

25. An assembly for mounting two or more panels or sheets as hereinbefore described with reference to any one or more of the accompanying drawings.

26. An assembly of two or more panels as hereinbefore described with reference to any one or more of the accompanying figures.

27. A poster display where the poster has been mounted using an assembly as claimed in any one of claims 1 to 14, 25 and 26 or using a method as claimed in any one of claims 15 to 24.

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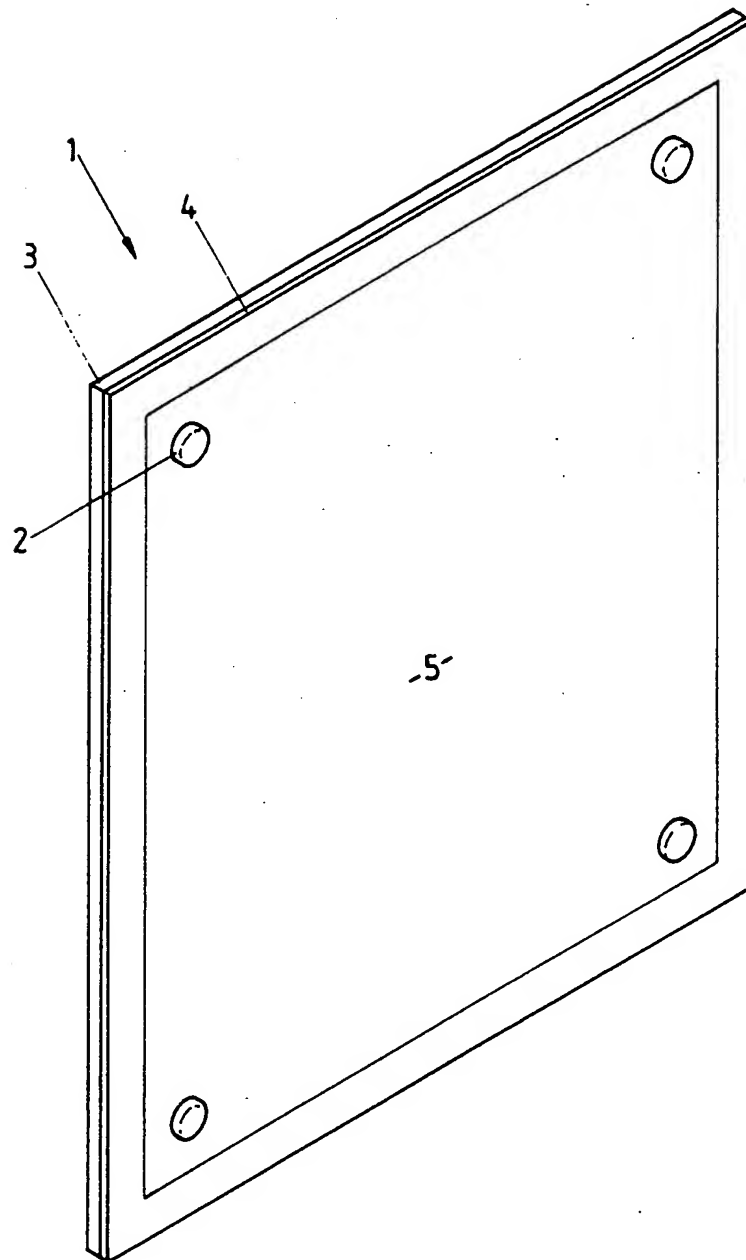


FIG. 1

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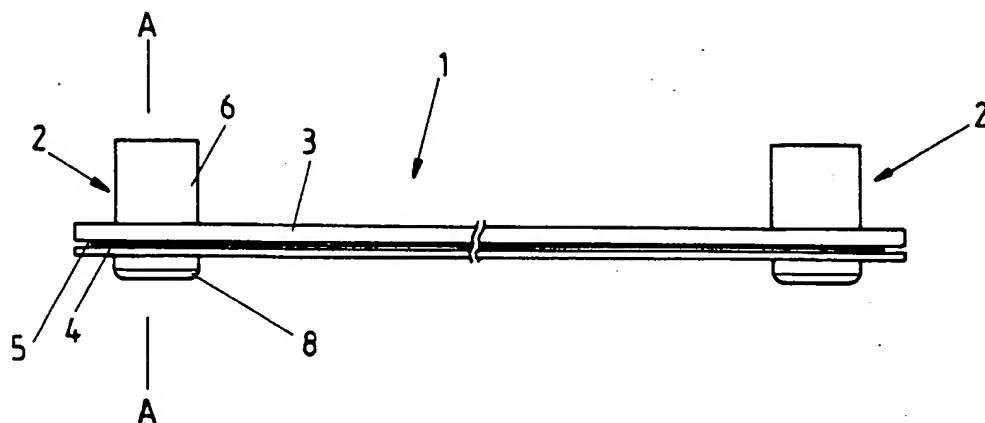


FIG. 2

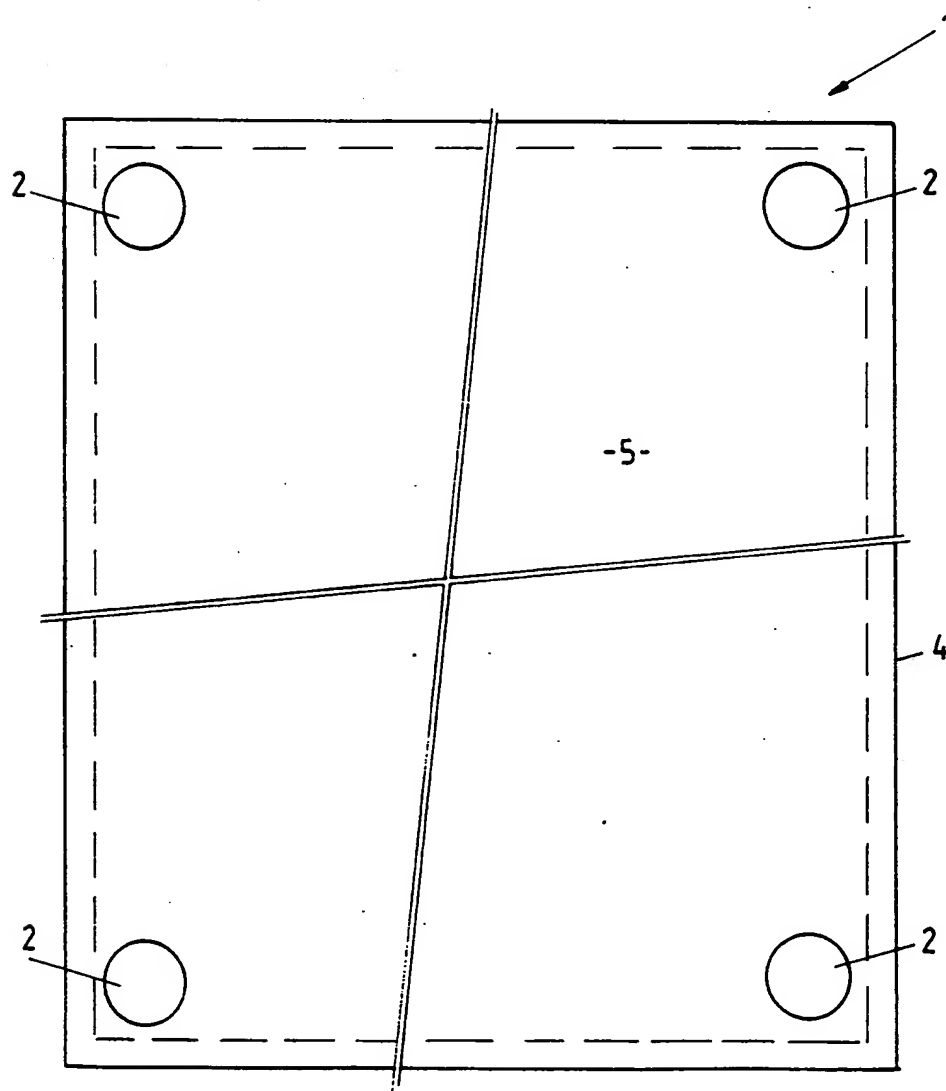


FIG. 3

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FIG. 4

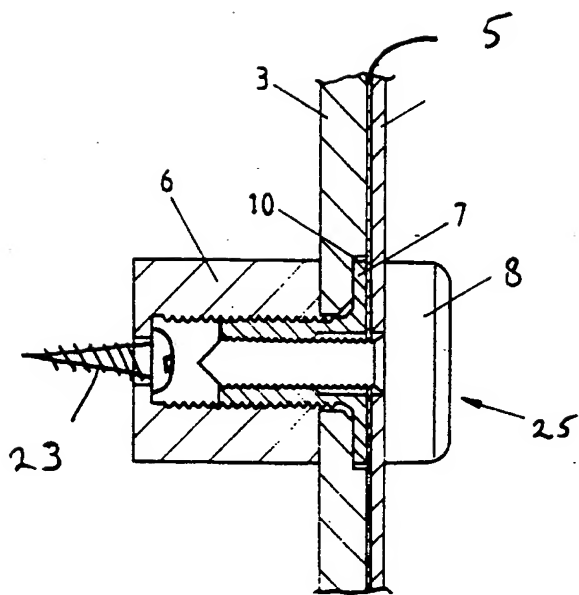
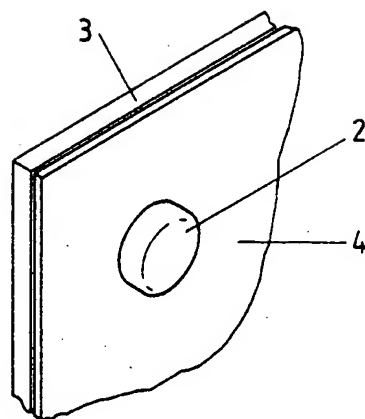


FIG. 5A

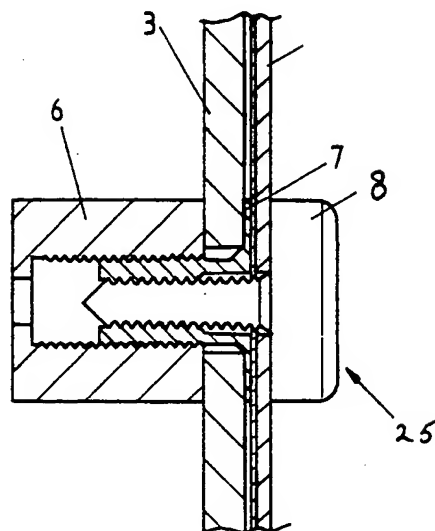


FIG. 5B

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FIG. 6A

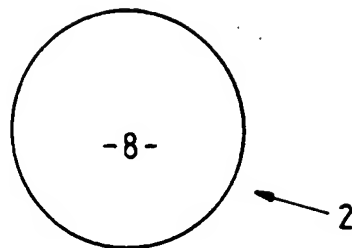


FIG. 6B

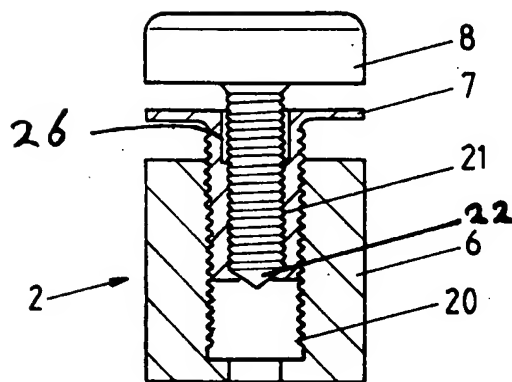
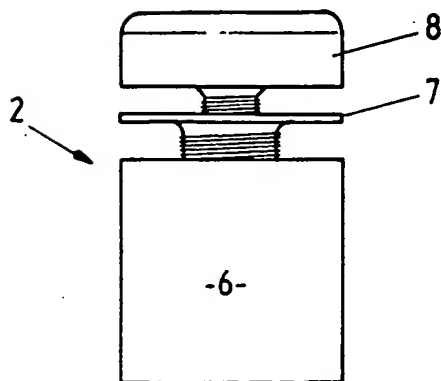


FIG. 6C



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FIG. 7A

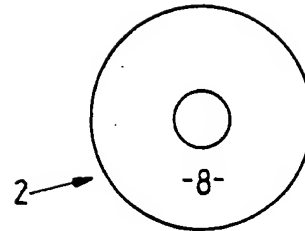
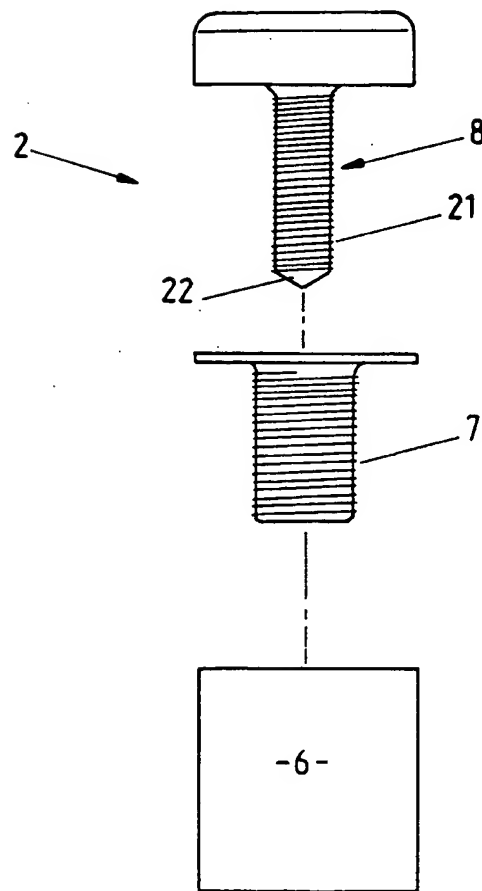


FIG. 7B



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FIG. 8

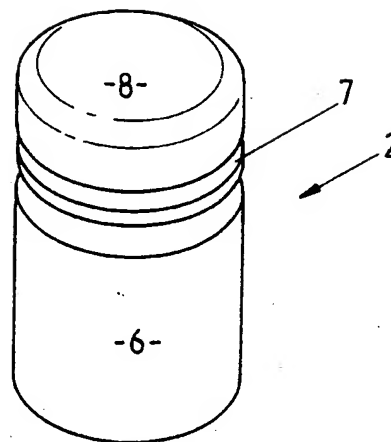
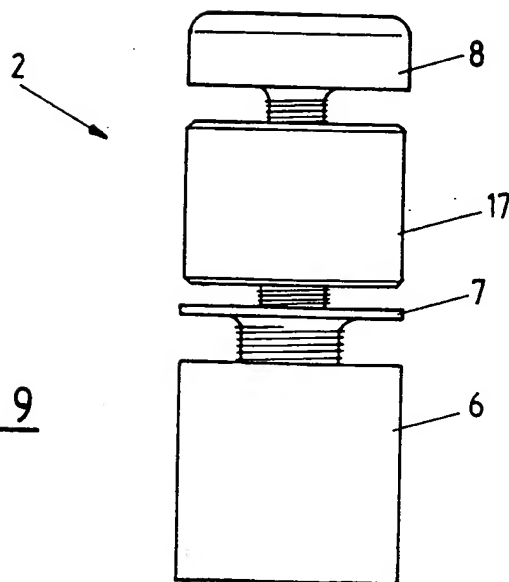
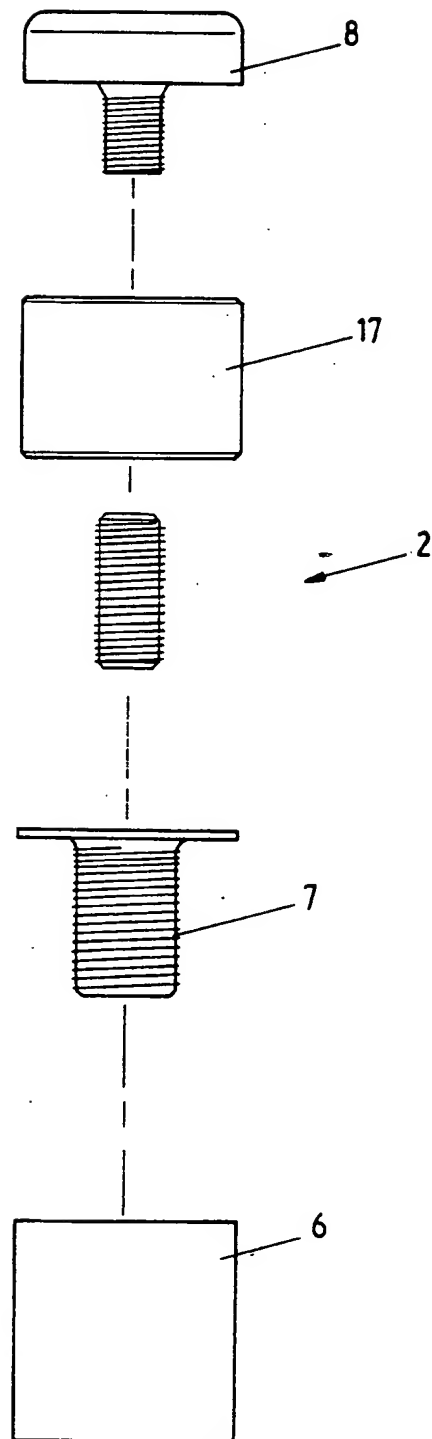


FIG. 9



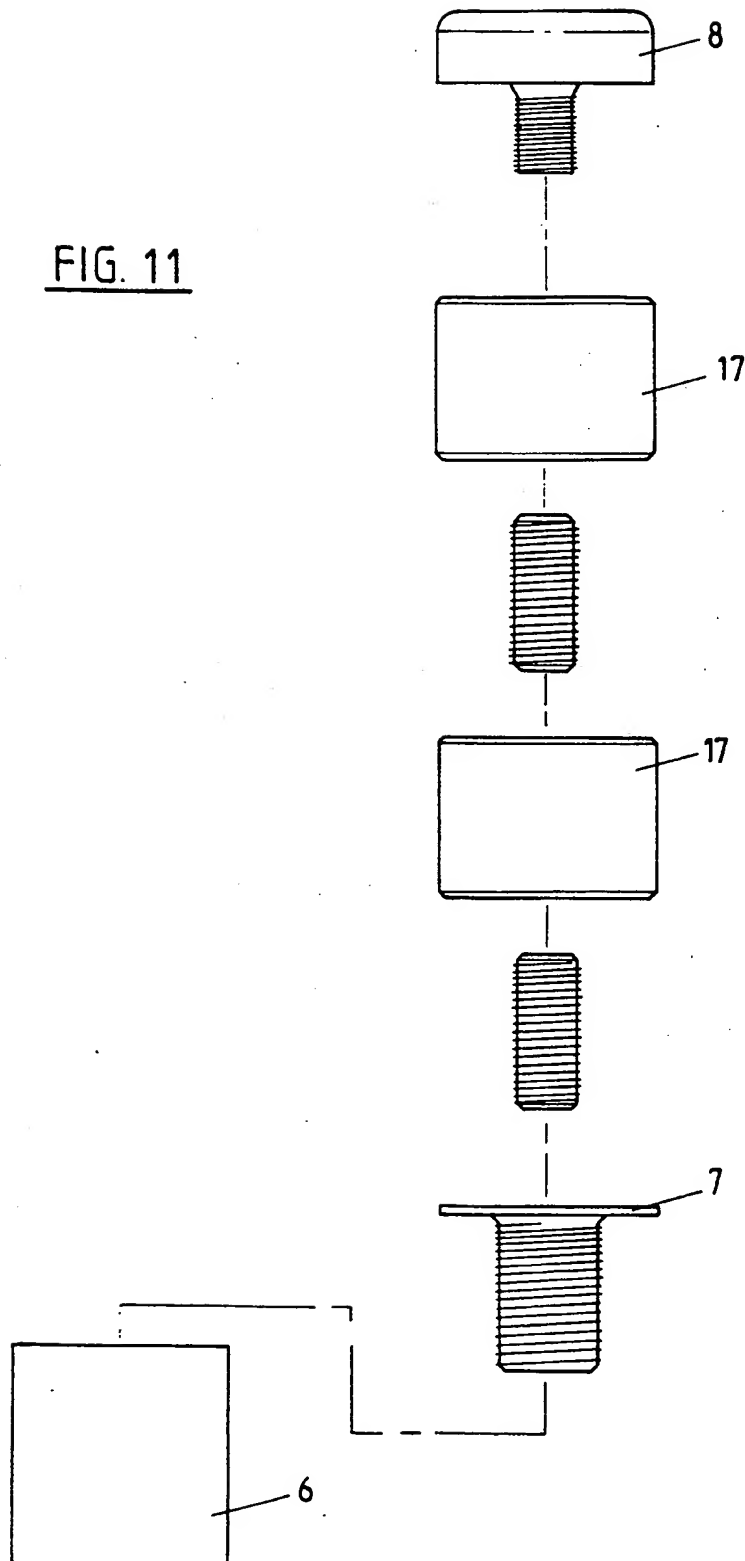
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FIG. 10



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FIG. 11



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FIG. 12A

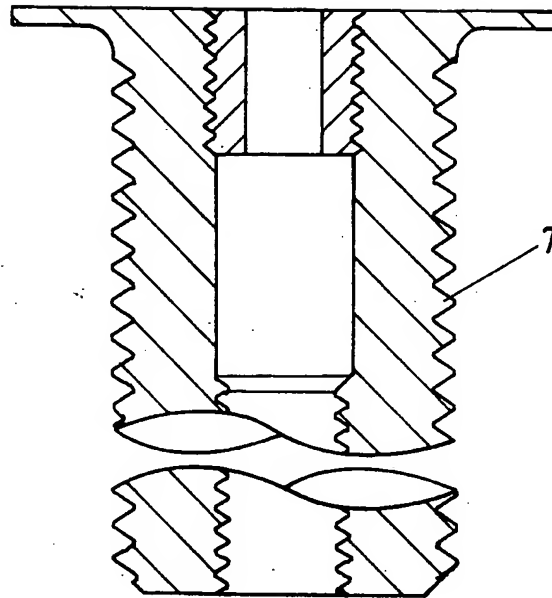
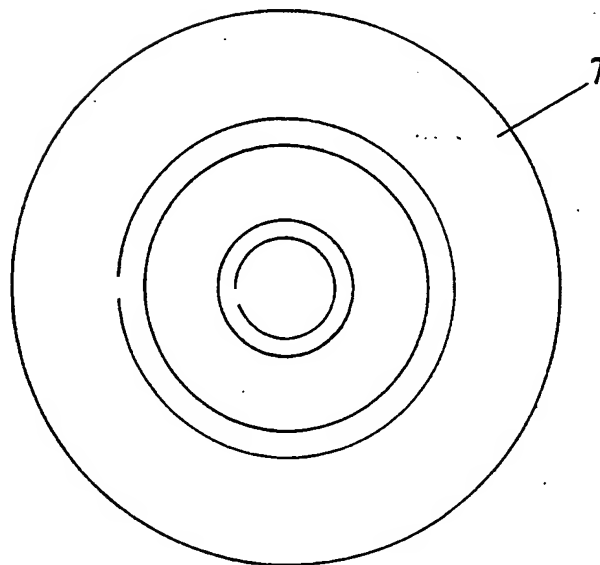


FIG. 12B



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FIG. 13A

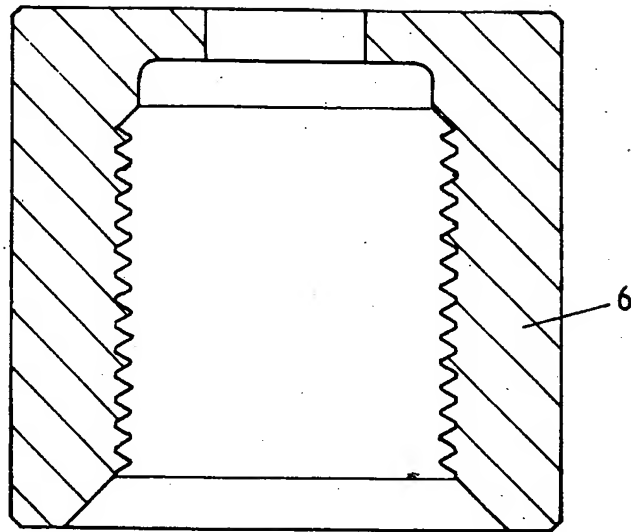
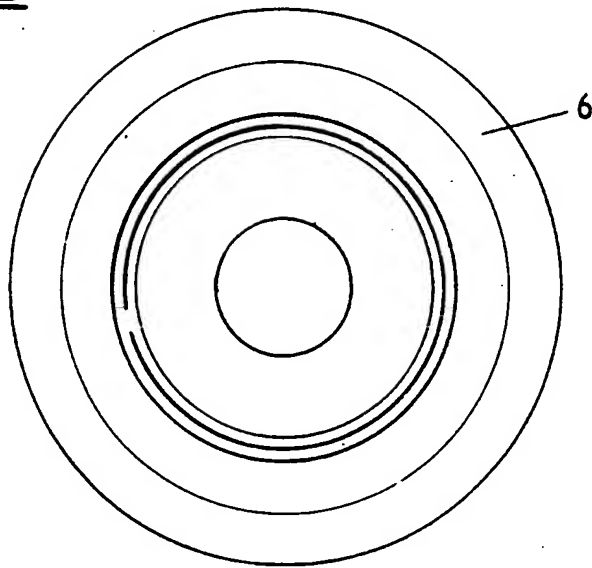


FIG. 13B



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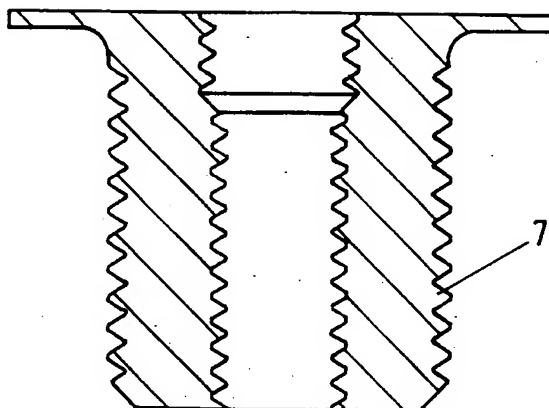


FIG. 14 A

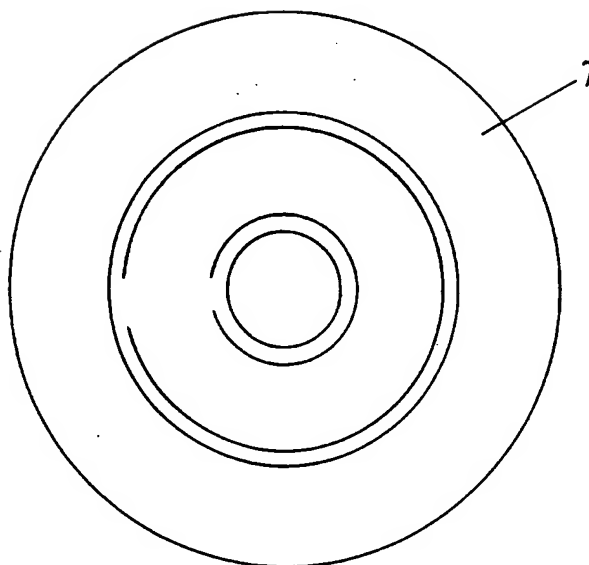
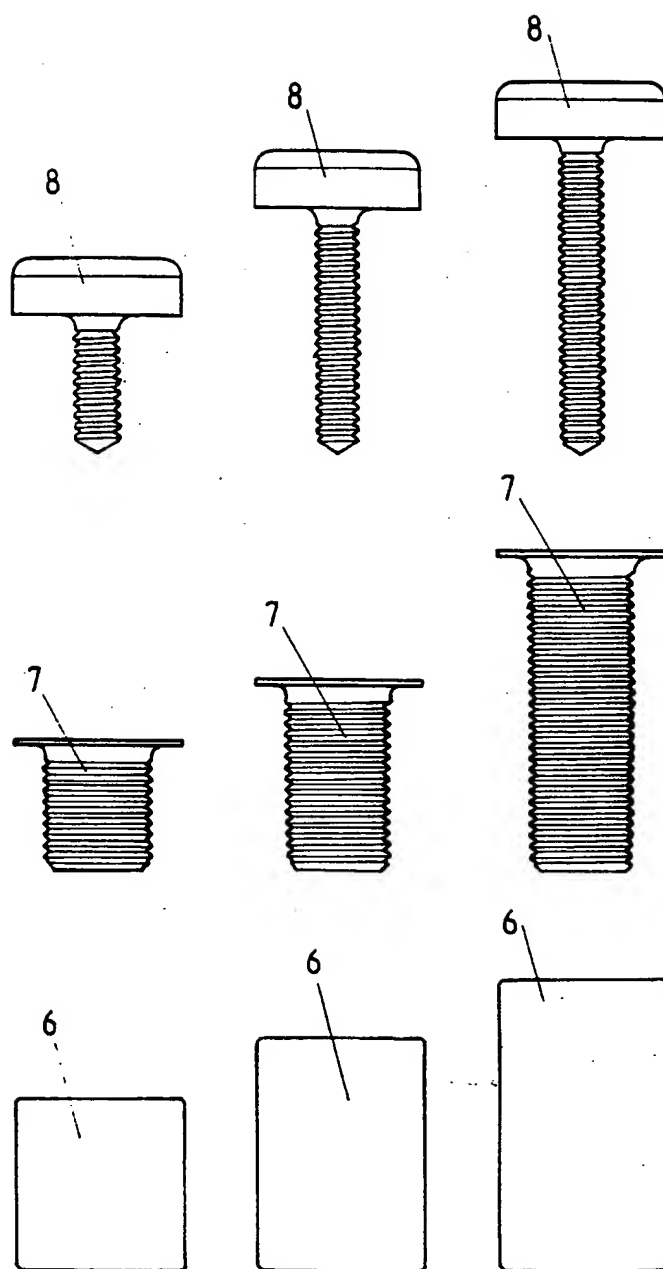


FIG. 14 B

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FIG. 15

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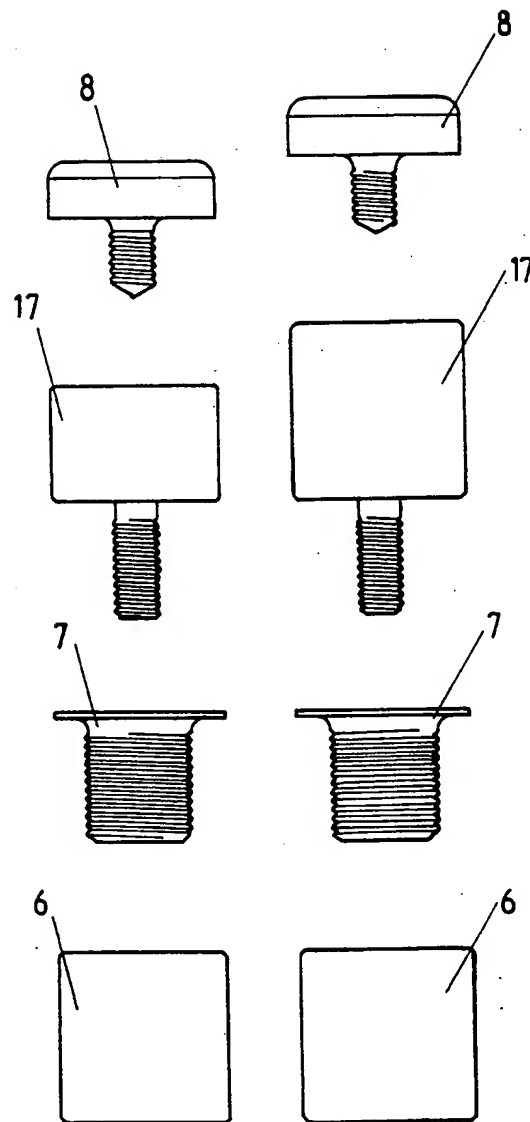


FIG. 16

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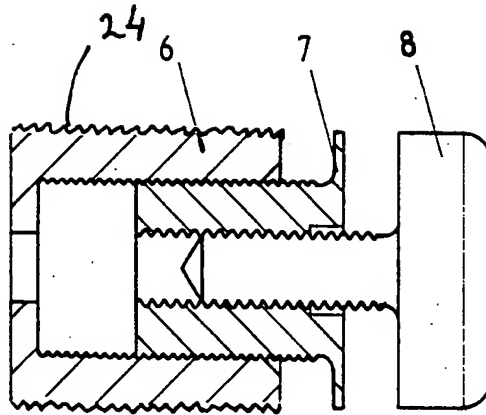


FIG 17

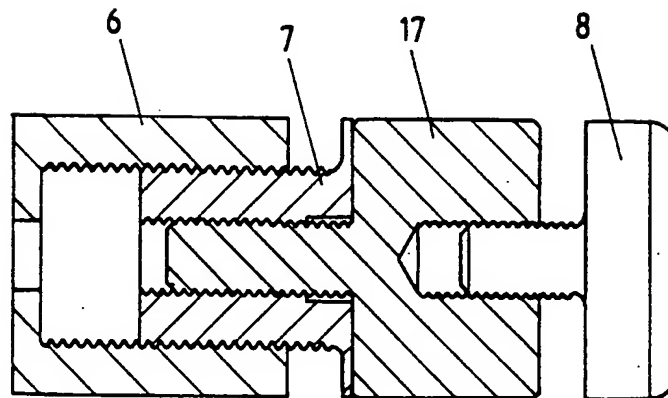


FIG. 18

INTERNATIONAL SEARCH REPORT

International Application No
PCT/NZ 99/00091

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G09F15/00 G09F7/18 F16B5/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 G09F F16B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 698 717 A (VERTAL SUD EST) 28 February 1996 (1996-02-28) column 3, line 21 -column 4, line 4; figure 1	1,3,6-8, 10, 13-15, 17,19, 20,22, 25,26
A	DE 296 22 046 U (VOLKER HETTIG PRAEZISIONSDREHT) 13 February 1997 (1997-02-13) page 1, line 20-25 page 7, line 18 -page 9, line 21; figure 1 -/--	1,3, 5-10, 12-17, 19-21, 24-27

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Date of the actual completion of the international search

8 November 1999

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

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PCT/NZ 99/00091

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>FR 2 580 739 A (SAINT GOBAIN VITRAGE) 24 October 1986 (1986-10-24) page 5, line 2 -page 6, line 5; figures 1,2</p> <p style="text-align: center;">-----</p>	<p>1,8,15, 19,24,27</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/NZ 99/00091

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0698717 A	28-02-1996	FR 2723757 A	23-02-1996
		DE 69501239 D	29-01-1998
		DE 69501239 T	23-07-1998
		ES 2112615 T	01-04-1998
DE 29622046 U	13-02-1997	DE 19756165 A	23-07-1998
FR 2580739 A	24-10-1986	NONE	

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